

AMENDMENTS TO THE CLAIMS

Listing of Claims:

Claims 1-6. (Canceled)

7. (Previously presented) A pixel cell comprising:

a photo-conversion device that generates charge;

a gate controlled charge storage region that stores the charge under control of a control gate,

a first transistor having its gate between the photo-conversion device and the charge storage region for transferring charge from the photo-conversion device to the charge storage region;

a sensing node; and

a second transistor having its gate between the charge storage region and the sensing node.

8. (Original) The pixel cell of claim 7, wherein the sensing node is a floating diffusion region.

9. (Original) The pixel cell of claim 7, wherein the control gate at least partially overlaps the first and second transistor gates.

Claims 10-12. (Canceled)

13. (Previously presented) A pixel cell comprising:

a photo-conversion device that generates charge;

a gate controlled charge storage region that stores the charge under control of a control gate, wherein the charge storage region comprises a doped region of a second conductivity type and a doped surface layer of a first conductivity type over and in contact with the doped region of a second conductivity type, and wherein the control gate is over the doped surface layer;

a first transistor having its gate between the photo-conversion device and the charge storage region for transferring charge from the photo-conversion device to the charge storage region;

a sensing node; and

a second transistor having its gate between the charge storage region and the sensing node.

14. (Original) The pixel cell of claim 13, wherein the control gate overlaps the first and second transistor gates.

Claims 15-45. (Canceled).